

In re Patent Application of:

CONTI

Serial No. 10/606,189

Filing Date: June 25, 2003

In the Claims:

Claims 1-8 (Cancelled).

9. (Currently Amended) A radio-frequency (RF) switching device comprising:

an input/output terminal;

a plurality of RF channels connected to said input/output terminal; and

switching means for selecting one of said plurality of RF channels based upon a switching control signal, said switching means comprising

a respective control module connected to each RF channel, each control module comprising

a control input for receiving the switching control signal,

a PIN diode having a cathode connected to said input/output terminal, and an anode, and

a control transistor comprising a control terminal connected to said control input, and a first conducting terminal connected to the anode of said PIN diode, the first conducting terminal forming a common node between ~~an~~ ~~intersection of~~ an anode of a PN diode formed by the control terminal and the first conducting terminal of said control transistor and a corresponding parasitic PN diode.

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10. (Previously Presented) An RF switching device according to Claim 9, wherein said control transistor comprises a lateral PNP transistor, and the control terminal forms the base and the first conducting terminal forms the collector of said lateral PNP transistor.

11. (Previously Presented) An RF switching device according to Claim 9, further comprising a substrate, and wherein said switching means is formed therein so that the RF switching device is an integrated circuit.

12. (Previously Presented) An RF switching device according to Claim 9, wherein said input/output terminal comprises an antenna; and wherein said plurality of RF channels comprise channels dedicated to transmission and channels dedicated to reception.

13. (Previously Presented) An RF switching device according to Claim 12, wherein said dedicated channels support different transmission standards operating at different frequencies.

14. (Previously Presented) An RF switching device according to Claim 13, wherein the different transmission standards comprise at least one of a GSM, a DCS, a PCS and a WCDMA standard.

15. (Currently Amended) A radio-frequency (RF) switching device comprising:
an input/output terminal;

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a plurality of RF channels connected to said input/output terminal; and

a switching circuit for selecting one of said plurality of RF channels based upon a switching control signal, said switching circuit comprising

a plurality of control modules connected to said plurality of RF channels, each control module comprising

a diode having a cathode connected to said input/output terminal, and an anode, and

a control transistor comprising a control terminal for receiving the switching control signal, and a first conducting terminal connected to the anode of said diode, the first conducting terminal forming a common node between an anode of a diode formed by the control terminal and the first conducting terminal of said control transistor, and a corresponding parasitic diode.

16. (Previously Presented) An RF switching device according to Claim 15, wherein said diode comprises a PIN diode.

Claim 17 (Cancelled).

18. (Previously Presented) An RF switching device

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according to Claim 15, wherein said control transistor comprises a lateral PNP transistor, and the control terminal forms the base and the first conducting terminal forms the collector of said lateral PNP transistor.

19. (Previously Presented) An RF switching device according to Claim 15, further comprising a substrate, and wherein said switching circuit is formed therein so that the RF switching device is an integrated circuit.

20. (Previously Presented) An RF switching device according to Claim 15, wherein said input/output terminal comprises an antenna; and wherein said plurality of RF channels comprise channels dedicated to transmission and channels dedicated to reception.

21. (Previously Presented) An RF switching device according to Claim 20, wherein said dedicated channels support different transmission standards operating at different frequencies.

22. (Previously Presented) An RF switching device according to Claim 21, wherein the different transmission standards comprise at least one of a GSM, a DCS, a PCS and a WCDMA standard.

23. (Currently Amended) A remote terminal for operating in a wireless communication system and comprising:

an antenna;

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a plurality of RF channels connected to said antenna;
and

a switching circuit for selecting one of said
plurality of RF channels based upon a switching control signal,
said switching circuit comprising

a plurality of control modules connected to
said plurality of RF channels, each control module
comprising

a diode having a cathode connected
to said antenna, and an anode, and

a control transistor comprising a
control terminal for receiving the
switching control signal, and a first
conducting terminal connected to the anode
of said diode, the first conducting
terminal forming a common node between
an anode of a diode formed by the
control terminal and the first
conducting terminal of said control
transistor, and a corresponding parasitic
diode.

24. (Previously Presented) A remote terminal
according to Claim 23, wherein said diode comprises a PIN
diode.

Claim 25 (Cancelled).

26. (Previously Presented) A remote terminal
according to Claim 23, wherein said control transistor

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comprises a lateral PNP transistor, and the control terminal forms the base and the first conducting terminal forms the collector of said lateral PNP transistor.

27. (Previously Presented) A remote terminal according to Claim 23, further comprising a substrate, and wherein said switching circuit is formed therein so that the RF switching device is an integrated circuit.

28. (Previously Presented) A remote terminal according to Claim 23, wherein said plurality of RF channels comprise channels dedicated to transmission and channels dedicated to reception.

29. (Previously Presented) A remote terminal according to Claim 28, wherein said dedicated channels support different transmission standards operating at different frequencies.

30. (Previously Presented) A remote terminal according to Claim 29, wherein the different transmission standards comprise at least one of a GSM, a DCS, a PCS and a WCDMA standard.

31. (Previously Presented) A remote terminal according to Claim 23, wherein said antenna, said plurality of RF channels and said switching circuit are configured so that the remote terminal is a mobile cellular telephone.

32. (Previously Presented) A remote terminal

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according to Claim 23, further comprising a processor for providing the switching signal to said switching circuit.

33. (Currently Amended) A method for making a radio-frequency (RF) switching device comprising:

connecting a plurality of RF channels to an input/output terminal; and

connecting a switching circuit to the plurality of RF channels for selecting one of the RF channels based upon a switching control signal, the switching circuit comprising a plurality of control modules connected to the plurality of RF channels, each control module comprising

a diode having a cathode connected to the input/output terminal, and an anode, and

a control transistor comprising a control terminal for receiving the switching control signal, and a first conducting terminal connected to the anode of the diode, the first conducting terminal forming a common node between an anode of a diode formed by the control terminal and the first conducting terminal of the control transistor, and a corresponding parasitic diode.

34. (Previously Presented) A method according to Claim 33, wherein the diode comprises a PIN diode.

Claim 35 (Cancelled).

36. (Previously Presented) A method according to Claim 33, wherein said control transistor comprises a lateral PNP

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transistor, and the control terminal forms the base and the first conducting terminal forms the collector of said lateral PNP transistor.

37. (Previously Presented) A method according to Claim 33, further comprising a substrate, and wherein the switching circuit is formed therein so that the RF switching device is an integrated circuit.

38. (Previously Presented) A method according to Claim 33, wherein the input/output terminal comprises an antenna; and wherein the plurality of RF channels comprise channels dedicated to transmission and channels dedicated to reception.

39. (Previously Presented) A method according to Claim 38, wherein the dedicated channels support different transmission standards operating at different frequencies.

40. (Previously Presented) A method according to Claim 39, wherein the different transmission standards comprise at least one of a GSM, a DCS, a PCS and a WCDMA standard.